


## EXECUTIVE SUMMARY

Labyrinth Ukraine («Лабіринт Україна») is a fully registered Ukrainian NGO (громадської організації) based in Kyiv. Our team is comprised of local Ukrainian experts and international subject matter experts with diverse backgrounds and competencies, including microbiology, virology, pharmacology/toxicology, medical anthropology, field epidemiology, biological safety and security (BS&S), clinical research, health information systems, human and environmental health risk assessments, and science policy and regulatory development. With 5+ years of demonstrated experience building and implementing programs and projects within Ukraine, our local team's successes are built upon the relationships established with Ukraine's government organizations, business community, and network of human and veterinary health professionals and research scientists that have benefitted to date from our work in country on behalf of the people of Ukraine. Labyrinth Ukraine seeks to leverage their experience in support of collaborative initiatives, which reduce the threat of high priority diseases through coordinated networking that drives transformative health solutions.

## BACKGROUND

Labyrinth Ukraine serves as a hub for engaging networks, stakeholders, and a deep bench of scientific expertise in support of Ukraine's health initiatives, as well as those of other countries across Eastern Europe and Eurasia (EEE). Specializing in biosurveillance and scientific collaborative biological threat reduction, we provide partners access to experts who possess a diverse range of skills and impressive funding records, with awards from U.S. Government and international agencies, including the U.S. Agency for International Development (USAID), U.S. Defense Threat Reduction Agency (DTRA), U.S. *President's Emergency Plan for AIDS Relief* (PEPFAR), Centers for Disease Control (CDC), the North Atlantic Treaty Organization (NATO), and European Union (EU) Horizon 2020. Our success is built on relationships, long-lasting collaborations with local health ministries, Embassy teams, non-profit organizations, academic partners, and other governmental sectors, through which strong field, clinical, and laboratory partnerships have evolved.

Our team members have assisted with the development and implementation of more than a dozen multi-national cooperative research projects to mitigate the threat of infectious diseases in support of DTRA Biological Threat Reduction Program (BTRP) objectives focused on Ukraine and other EEE countries. Through these efforts, we have helped link Ukraine's Ministries of Health, Agrarian Policy, and Defense in collaborative pursuits to assess risk and inform countermeasures for priority pathogens, spanning a range of human and animal diseases. In addition to building research capacity, team members developed and managed the Science Writing Mentorship Program, a robust DTRA initiative for integrating Ukraine's scientists into the international science community through mentorship, leading to publications in peer-reviewed journals and positioning scientists for grant opportunities. Similarly, we have administered grantsmanship training, guiding Ukraine's scientists to funding for sustainable research; while also establishing science policy working groups and hosting policy development forums in order to build understanding between all stakeholders and decisionmakers, and to establish coalitions that could contribute to the policy and regulatory development process. This work has contributed to building regional networks through the creation of forums and information pipelines for sharing insights and expertise, particularly with regard to transboundary diseases. In further support of regional engagement

and in the interest of global biosecurity, team members facilitated Tabletop and Field Training Exercises (TTX and FTX, respectively), such as the "Meeting on cross-border cooperation between Ukraine, the Republic of Moldova and the Republic of Belarus within the framework of the Biosurveillance Network of the Silk Road" (October 2019). With prior and current experience implementing projects that span Ukraine, Armenia, and Azerbaijan, and engaging scientists in regional collaborations from countries such as Georgia, Poland, and Belarus, we are well versed in the requirements for successful and seamless integration to support priority health objectives.

Our team members' long experience building international collaborations has helped strengthen national surveillance, detection, and response capacity for emerging infectious diseases (EIDs) and has created a conduit for high-quality clinical, laboratory, field, and behavioral research studies in diverse, often challenging, settings. Activities have included risk assessments and development of standard operating procedures (SOPs) for field and lab diagnostics, safety, and security; collaborative biological research; outbreak response; as well as multidisciplinary investigation of drivers of disease spillover. These activities have enhanced in-country capacity for rapid and productive engagement in transformative projects, ranging from scientific mentoring in grantsmanship and networking to training in advanced investigations of high priority diseases. Labyrinth Ukraine endeavors to enrich efforts to ensure sustainable scientific pursuits with recognized commitment to local, regional, and international partnerships.

Importantly, Labyrinth Ukraine prides itself on our ability to communicate openly with internal and external stakeholders and to drive excellent service through rigorous performance standards for high-quality work, delivered on time and on budget. Labyrinth Ukraine is fully able to provide multiple consulting services, and from concept development through implementation, to serve as a facilitating collaborator on public health programs and projects. Our senior team brings decades of experience in working with U.S. government programs and possesses intimate understanding and knowledge of how to best navigate the funding process and build successful proposals. Coupled with our multinational experience in delivering environmental and human health risk assessments, policy and regulatory development, and providing senior decisionmakers with science-based advisory services, Labyrinth Ukraine's Kyiv-based team is ready to contribute to and support a multitude of environmental, human, and One Health objectives.

Labyrinth Ukraine is an affiliate of Labyrinth Global Health, Inc., a women-owned small business with deep expertise and a proven track record in supporting development and implementation of compelling strategies to offset health risks through application of innovative solutions that are both sustainable and effective. Labyrinth Global Health endeavors to enrich, and not duplicate, efforts to ensure sustainable scientific engagement. As an affiliate of Labyrinth Global Health, Labyrinth Ukraine benefits from access to a network of affiliated offices including available biosafety level (BSL)-2 laboratory space in Kinshasa, Democratic Republic of Congo (DRC), hosted within the national Ministry of Health (MOH) biomedical reference lab (INRB); a large collaborative network in Cameroon, with experts based at the Cameroon military health research center (CRESAR), as well as within various collaborating non-governmental organizations in country. In addition, Labyrinth Global Health has a proven network of subject matter experts and affiliates in multiple regional partners, including Belarus, Albania, Azerbaijan, Georgia, Armenia, Moldova, Romania, and Poland.

## CONCLUSION

With this statement, we are pleased to convey Labyrinth Ukraine's commitment to serving the needs of the people of Ukraine through assisting the Ministry of Health of Ukraine. We are eager and well positioned to support the Public Health Center (PHC) of the Ministry of Health of Ukraine and their partners through the provision of scientific assistance however it may be needed. Examples of the type of support that we can provide includes but is not limited to:

- Training of science and medical personnel, including in methods for BS&S, laboratory diagnostics, clinical research, Quality Management System (QMS), data analytics, grantsmanship, etc.

- Enhancement of biosurveillance systems and clinical research networks.
- Assistance with policy and regulatory development, as well as implementing risk assessments to inform regulations and legislation.
- Assistance with the development and implementation of collaborative projects and programs.
- Expansion of networks; locally, regionally, and globally.
- Mentorship to support achievement of mission objectives.
- Renovation and enhancement of facilities, as well as assistance with validation and accreditation.

We welcome the opportunity, and are grateful for the invitation, to join PHC and their partners in this important pursuit for improving the health and well-being of the people of Ukraine.

## DOMAIN EXPERTISE

Labyrinth Ukraine offers the following domain-specific expertise for optimal achievement of mission objectives:

### *Biosurveillance Leadership*

Our team's seasoned professionals possess decades-long experience establishing biosurveillance systems and leading robust programs to support the characterization of endemic disease risk maps, behavioral risk analytics (both qualitative and quantitative risk assessments), and tracking alerts and cases, within animal and human populations. With prestigious funding records and in-depth knowledge of viral systems, cutting-edge technology, virus-induced disease models, and experience in both science and medicine, our expert consultants can provide the leadership needed to successfully initiate and maintain biosurveillance networks in diverse contexts, whether supporting partners' science and technology teams or representing interests to external stakeholders. We are eager to assist our network partners in Ukraine through the leveraging of our experience working on a range of high priority diseases, including but not limited to HIV/AIDS, tuberculosis, hemorrhagic fevers, influenza, and others.

### *Biosciences Subject Matter Experts*

From the field to the bench, discovery to policy reform, Labyrinth Ukraine offers access to expert consultants that possess a broad range of skills and knowledge. With biocontainment experience, as well as working knowledge of biorisk management practices, our experts can easily interface with networks and stakeholders to advance strategies for improving human health. Our experts have led a variety of biosurveillance studies, biorisk assessments, and EID investigations (e.g., studying zoonotic diseases at human-animal interfaces, including investigations on bat-borne pathogens); worked on strengthening World Health Organization International Health Regulations capacity in support of the Global Health Security Agenda through the U.S. CDC; conducted HIV/AIDS surveillance and prevention among most-at-risk populations; as well as supported health system strengthening, One Health promotion, and outbreak response capacity reinforcement.

Considering the pandemic potential of viruses, Labyrinth Ukraine's experts also have vast expertise in virology, with professionals well versed in viral pathogenesis, protective or pathogenic immune responses, host genetic variation, virus-host interactions, cellular and physiological basis for disease, *in vivo* and *in vitro* models of disease, and other topics key to scientific exploration and discovery. By nature of their work, our virology experts are also highly experienced at managing the safety and security risks associated with especially dangerous pathogens; knowledge and skills that have been leveraged for management of emerging health crisis. Our senior virologists have been engaged in the fight against EIDs, training staff to safely collect, store, and transport potentially-hazardous biological specimens from remote field sites to national and international laboratories. Through the efforts of our experts, country capacity for detection of zoonotic pathogens has been enhanced.

### *Scientific Writing*

With hundreds of publications spanning multiple peer-reviewed journals, our experts are accomplished scientific writers, possessing impressive funding records and papers in renown international scientific journals, such as Nature and Lancet. Team members also led the design, development, and success of the Science Writing Mentorship Program (see above), including the selection and oversight of writing projects. Through these successes, we are well positioned to provide access to a cadre of experts, highly skilled in scientific communication.

### *Bioethics and Policy Advisement*

Recognizing that integrity of the highest ethical standard is central to scientific success, Labyrinth Ukraine has access to a network of bioethicists to support scientific pursuits. This asset is deemed critical for engaging Ministries and other stakeholders in the development of vaccines, anti-viral products, diagnostics, and other measures to mitigate disease risk. We offer bioethics expert consultants with a unique familiarity of country-specific ethical and regulatory frameworks coupled to working relationships with decision-makers. Team members have facilitated the development of and advocacy for processes, laws, and policy to enhance partner country capabilities to develop specific country engagement plans. Our support has included risk assessments and gap analyses, as well as support and recommendations in the form of strategic plans to determine how to fill gaps. Our experience contributing to U.S. Congressional oversight hearings and the U.S. Government regulatory development and review process help to inform our approach for working with Ministries, elected officials, and other stakeholders. Whether engaging existing stakeholders or establishing coalitions where none had previously existed, our approach to developing and integrating policy and regulatory recommendations incorporates building deep understanding of local needs and risk perception and advising on appropriate risk communication strategies to ensure public perception is well-informed and supports needed reform and alignment with international standards and norms. Team members have adapted, applied, and taught these skills in regions as diverse as the islands of Micronesia to Ukraine and its regional partners.

### *Project Management*

Labyrinth Ukraine team members also have deep expertise in international Project Management (PM) with 20+ years of management of bilateral and multilateral research, biosurveillance, laboratory diagnostics, and cooperative/collaborative development projects, including procurement, financial management, and logistical coordination. Our strong PM bench possesses public health, laboratory sciences, and research backgrounds with diverse competencies and working knowledge of field challenges. We are experienced in engaging expert consultants and country-team led project design, planning, implementation, and monitoring and evaluation. Labyrinth can assist partners and stakeholders in developing and implementing strategies for biosurveillance systems and biological research, and we can provide consultancy services, blending seamlessly within collaborative pursuits.